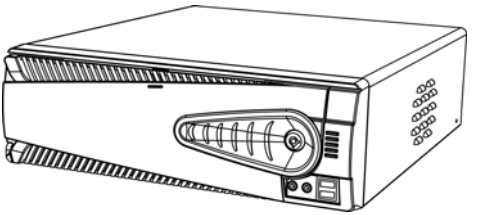
logic controls
A Bematech Company

SB9100 User Manual



Contents

About this Manual

Thank you for purchasing our SB9100 Series. This terminal offers highly enhanced features, with easy connection to various optional devices for optimum performance. This user manual describes how to setup and connect your terminal.

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Safety Notices

Before You Proceed

- Read the safety notices and the User Manual carefully before turning the product on.
- Keep the box and packaging in case the product needs to be shipped in the future.
- Follow the product and warning label instructions.
- Any changes or modifications that do not follow the instructions in this manual will void this product's warranty.

Power Supply Safety Notes

- To avoid electric shocks, disconnect the power cord from the electrical outlet before relocating the system.
- Make sure the voltage of the power outlet conforms within voltage range of the terminal. Failure to comply may cause the electric shock or damage to the terminal. If you are not sure of the electricity voltage that you are using, contact your local electricity company.
- To avoid fire or electric shocks, do not overload electric power outlets.
- Protect the power cord from being walked on or pinched particularly at plug, convenience receptacles, and the point where they exit from the apparatus.

Operating Instructions

- Keep this manual for future reference.
- Keep this equipment from moisture and dust.
- Place the equipment on a stable surface before setting it up.
- If there is any of the following situation arise, notify a qualified service technician immediately:
  - The power cord or plug is damaged.
  - Liquid has been spilt on to the equipment.
  - The equipment has been dropped and damaged.
  - The equipment does not function normally.
- Do not block any ventilation openings to prevent the equipment from overheat.
- Do not leave the equipment in a non air-conditioned environment where the storage temperature may go above 70°C (158°F), as this can cause damage to the equipment.

Maintenance

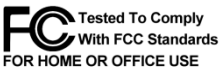
- Gently wipe screen with a clean soft hair lens brush, or a lint-free cloth.
- Do not apply pressure to the screen while cleaning
- Do not spray any liquid directly onto the screen or the casing of the SB9100 Terminal
- Chemical cleaners have been reported to cause damage on the screen of the SB9100 Terminal.

Warning and Attention

- The technical descriptions and specifications of the equipment are subject to change without notice.
- For safety reasons, wear gloves when assembling the product.

Patent

Patent pending.



Federal Communications (FCC Statement)

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesirable operation.

This equipment has been tested and found to comply within the limit of a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by switching the equipment on and off, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the interference receiving antenna.
- Increase the distance of separation between the equipment and interference receiver.
- Connect the equipment to a power outlet on a circuit different from that to which the interference receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

WARNING:

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Note:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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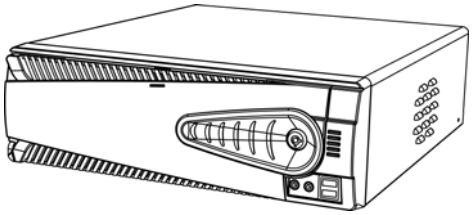
Welcome

Congratulations on your purchase of this POS PC. This product is specifically designed to offer you enhanced features, speed, and performance to promote your business higher flexibility and a superior customer experience.

Overview of SB9100



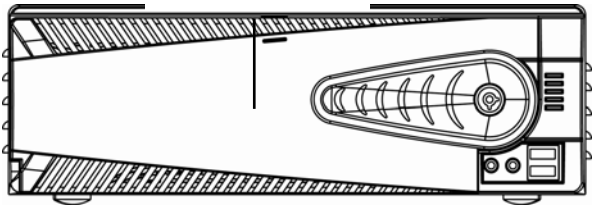
This POS terminal comes equipped with the following features:

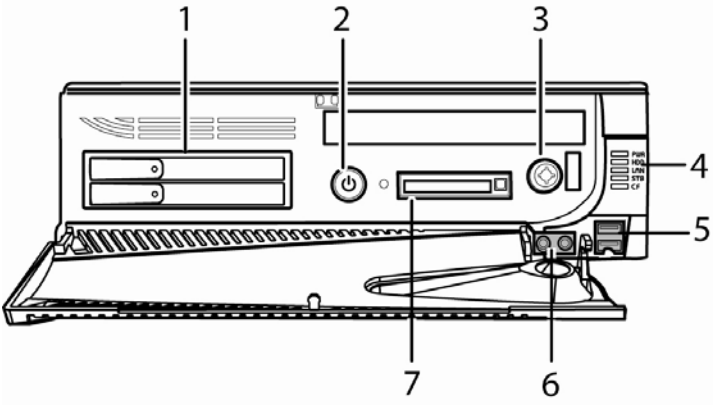
Saving Cost of Ownership	Modular design provides the owner with the following benefits: (a) cost effectiveness, (b) customization flexibility, and (c) easy maintenance.
Compact Size/ Aesthetic Design	This sturdy, power saving economic POS system features a sleek, compact design base that saves counter space and yields a variety of peripheral options, hence higher flexibility and adds appeal to the service environment.
Dust/Water-proof	IP32 SB9100 series features a highly durable, rigorously tested design that is reliable and dependable in rugged environments.
POSReady 2009/ WinXP Pro Solution	Solution is recommended to be bundled with embedded solution for high performance and other added values.
Environment Protection	Environmental friendly, RoHS compliant product.
Higher Stability	The SB9100 has a longer overall system MTBF to provide a higher stability during operation.

Front View

To open the front cover, press the cover release latch.

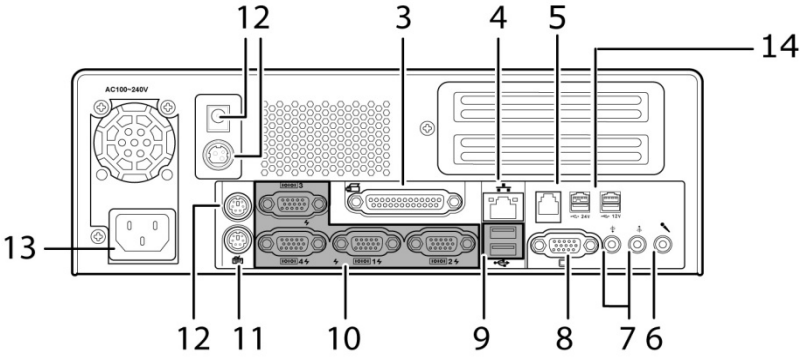
Cover release latch





	DESCRIPTION
1	HDD bay
2	Power button
3	Key lock
4	LED status indicator
5	Two front access USB 2.0 ports
6	Headphone and microphone jacks
7	Compact flash card slot

Rear View

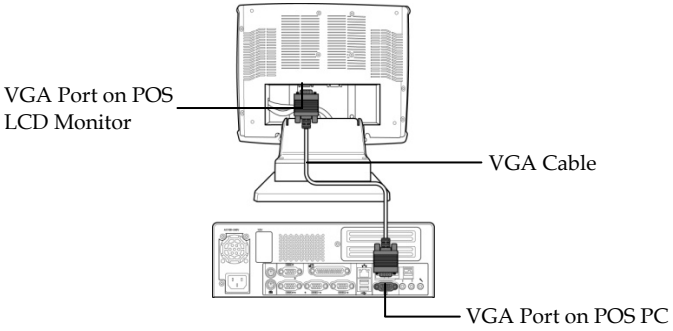


	DESCRIPTION	FUNCTION
1	12V DC Output	Connects to a LCD
2	24V DC Output	Connects to a POS Printer
3	LPT 1	Connects to a POS Printer.
4	LAN Port	Connects to the LAN.
5	Cash Drawer Port	Connects to a cash drawer (12V/24V Solenoid Type of COM6)
6	Microphone Jack	Connects to a microphone.
7	Audio Line In/Out Connectors	Connects to audio source / external speakers.
8	Analog VGA Port	Connects to a POS LCD monitor.
9	Two USB Ports	Connect to USB 2.0 device.
10	COM Ports 1 – 4	Connect to POS peripherals.
11	PS/2 Keyboard Port	Connects to a PS/2 keyboard.
12	PS/2 Mouse Port	Connects to a PS/2 mouse.
13	AC Power Inlet	Connects to an AC power cord.
14	Two Powered USB Ports 5V/24V	Connect to a powered USB device.

Connecting to a POS Terminal

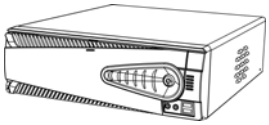
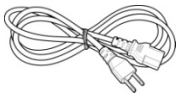
Your SB9100 POS PC collaborates with the Pyramid Touch Monitor to expand the capability and the flexibility for your business.

1. Connect one end of the VGA cable to the VGA port on the back of your SB9100 POS PC.
2. Connect the other end of the VGA cable to the VGA port on the back of the POS LCD Monitor.



Unpacking

Before setting up your SB9100, check that the package contains the following items. If any of the items are missing or damaged, contact your vendor immediately.

SB9100 POS PC	AC POWER CORD	ACCESSORY PACKAGE
		

Contents of the Accessory Package:

- Quick Installation Guide
- Software Driver CD-ROM
- Front Cover Key

Getting Started

This chapter describes how to install the optional accessories on your SB9100 POS PC for optimum serviceability.

Pre-installation Notice

Before you start installing your SB9100, please read the following notices carefully.

- The SB9100 features two PCI slots.
- Do not plug in or unplug any interior devices, such as memory module or any function card, when the ATX PSU is powered on.
- The LAN chipset uses Intel Pro family network adapter. The Terminal has be built-in the PXE Boot ROM function within the BIOS to execute Boot ROM already.
- For installation and compatibility, using the DDR RAM Module from the original manufacturer is recommended.
- The USB device connector is Hot Swap. Do not plug in or unplug any connectors other than USB devices when the power is on.
- The spill proof design of SB9100 conforms to IP-32 standard.
- Do not insert or remove any devices or components from the SB9100 while the power is on.

Default Settings

Default settings for SB9100 POS PC serial ports

COM1	COM2	COM3	COM4
IRQ 4	IRQ 3	IRQ 4	IRQ 3

Limitations

Output Voltage COM Port	Average	Max. Current
9th PIN of COM1	5V / 0.5A, 12V / 0.5A	5V / 0.7A, 12V / 0.6A
9th PIN of COM2	5V / 0.5A, 12V / 0.5A	5V / 0.7A, 12V / 0.6A
9th PIN of COM3	5V / 0.5A, 12V / 0.5A	5V / 0.7A, 12V / 0.6A
9th PIN of COM4	5V / 0.5A, 12V / 0.5A	5V / 0.7A, 12V / 0.6A

We strongly recommend that you use the following add-on devices to expand the utilities of your SB9100 POS PC.

Add-on Card Type	Brand	Model No.	Remarks
LAN	Realtek	RTL8139C/ D	10/100 Base T
	SIS	SIS900	10/100 Base T
	D-Link	DFE-530TX	10/100 Base T
	3 COM	3C905C	10/100 Base T
Modem Card	Motorola	SM56	56K
	Conexant (Rockwell)	MD-56KUR4	56K
Wireless LAN	D-Link	DWL-520+	IEEE 802.11b
	D-Link	DWL-G520+	IEEE 802.11g
CF Card	InnoDisk	64MB ~8GB	Industry Level
Disk on Module	InnoDisk	64MB ~4GB	IDE ATA 44 pin
2nd VGA PCI Card		ATI Radeon 7000	
PCMCIA PCI Slot Card		Card Bus	16/32 bit, 3.3V/5V

System Upgrade

Your warranty remains in effect only if all internal settings are done by an authorized dealer or technician. This section is intended only for users who wish to perform adjustments by themselves and thereby void the warranty.

Removing the Cover

You will need the following tools to disassemble a SB9100 POS PC:

- A screwdriver
- Labeling material
- A container to store the screws temporarily

	WARNING: Make sure that the power of your SB9100 POS PC is turned off before removing the chassis.

Installing Add-On Cards

You may need to install one or more add-on card to expand the system capability in the future. The SB9100 POS PC includes two PCI slots for additional peripherals.

	WARNING: Due to the space saving design of the SB9100 POS PC, the dimensions of add-on cards are restricted to the size of 110mm (H) x 140mm(L). Make sure the add-on card conforms to the requirement before installation.

After installing the add-on card, perform card configuration.

Installing a Hard Disk Drive

WARNING:

If you purchase a SB9100 POS PC without a hard disk drive, contact your dealer for system upgrade.

Memory Configuration

You can increase the system memory for your SB9100 POS PC via onboard DDR Ⅱ SODIMM Socket. The SB9100 POS PC supports one bank of 256/512/1024 MB DIMM Modules.

WARNING:

Consult your dealer for memory upgrades.

Technical Information

Product Specifications

ITEM	SPECIFICATION
Model Name	SB9100
Processor	Intel Celeron / Dual-Core / Core 2 Duo Processor (LGA775)
Memory	240-pin DDR2 RAM * 2, up to 4GB (533/667)
System Chipset	Intel 945GC+ICH7
BIOS	Award BIOS with enhanced ACPI 1.0 PnP/APM/DMI/ESCD/PCI bus 2.1/ On Now/ DRAM ECC
AGP 3D Graphics	Intel Graphics Media Accelerator 950, On Board Graphic Max. Share Memory Up To 224MB
Parallel Port	One LPT port (SPP/EPP/ECP), IRQ and address selectable by BIOS setup
Serial Port	Total 4 COM ports on board, IRQ selectable by BIOS setup Output on 9th pin by jumper selector. Each voltage output with poly switch protector.
USB Port	2 X USB 2.0 Ports, 2 X Powered USB Port (5V/24V)
IDE or SATA Port	1 X IDE Port 2 X SATA Port
PCI Slots	Support 2 X PCI Slots
DC Output	DC 12V Output X 1 DC 24V Output X 1
Thermal Solution	One heat-sink with Fan (Base on Fan Speed Control technology) for CPU Chip. One heat-sink with Fan for N/B Chip.
Compact Flash Card	One bootable compact flash card socket (Type I/II)

Appendix — *Technical Information*

ITEM	SPECIFICATION
Cash Drawer Port	One cash drawer port with status sensor. (EPSON ESC Pin define)
System Power	ATX 250W Internal Power Supply. AC 100 to 240V Full Range.
System Trigger Control	System front side tact switch (ATX Trigger) below the LCD display with bottom.
Ethernet Port	Intel PRO 1000 Ethernet chip on board Intel Ethernet chips on board (10/100/1000 base- T)
Audio	AC97 CODEC on board
Keyboard	PS/2
Mouse	PS/2
System Size	340mm (L) x 295mm (W) x 95mm (H)
S/W Compatibility	DOS / Windows 2000 / XP / XPE / WEPOS / Vista/ POSReady2009 / Windows 7
Operation Temperature	0°C to 40°C
Storage Temperature	-25°C to 70°C

Frequently Asked Questions (FAQ)

Question 1: Why does the system appear unstable after updating BIOS?

Answer: Load optimized defaults (or load SETUP Default) after flashing BIOS. If the system remains unstable, clear CMOS to solve the problem.

Question 2: How do I clear CMOS?

Answer: To clear CMOS, do the following:

1. Turn off power and switch off the power adapter.
2. Remove the jumper from clear CMOS 2-3 PIN and insert the jumper to clear CMOS 1-2 PIN.
3. Remove the jumper from clear CMOS 1-2 PIN and re-insert the jumper to clear CMOS 2-3 PIN.
4. Switch on the power again.
5. Press **Delete** to enter CMOS setting and load optimized defaults.
6. Save changes and reboot the system.

Question 3: How to use the Boot Menu?

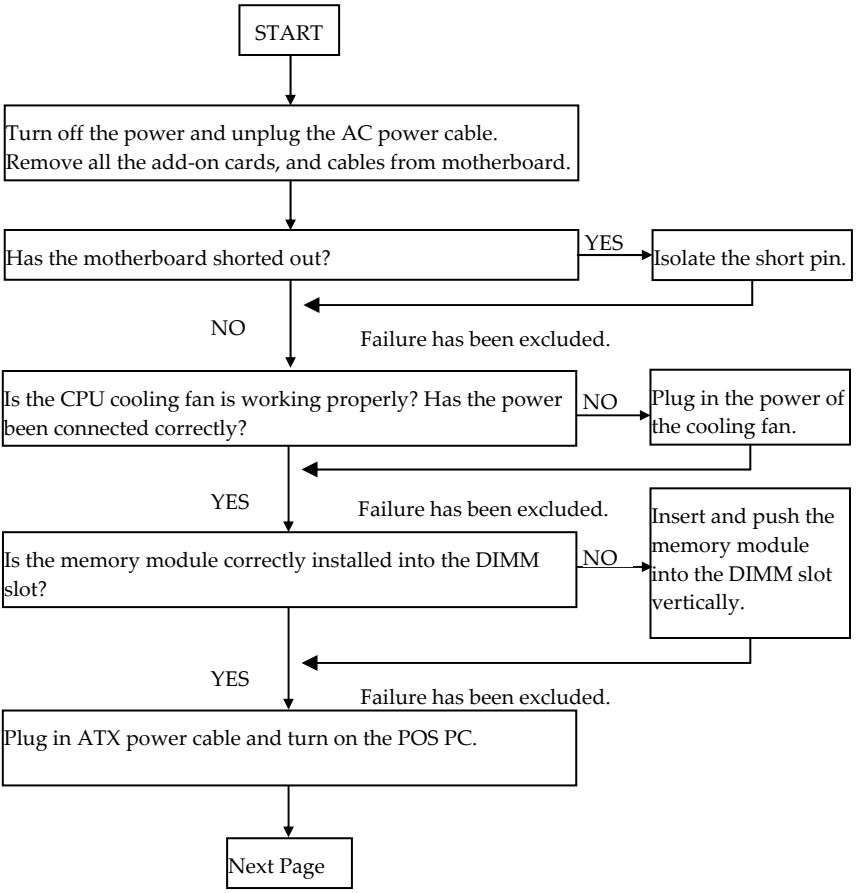
Answer: To use the Boot Menu, do the following:

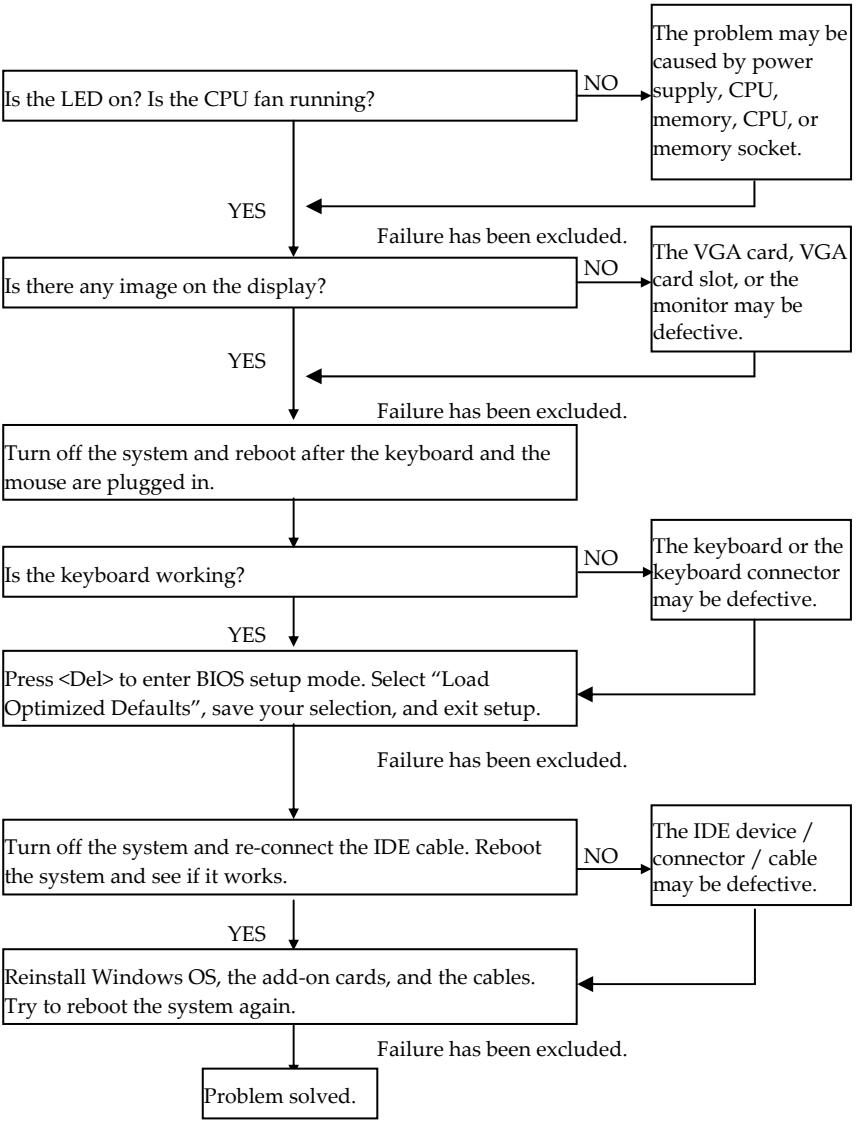
1. Press **F9** to enter the Boot Menu.
2. Select the Boot device from the Boot Menu.

Troubleshooting

WARNING:

If you encounter any trouble during boot up, please follow the troubleshooting procedures below to solve the problem.


START
Turn off the power and unplug the AC power cable.
Remove all the add-on cards, and cables from motherboard.
Has the motherboard shorted out?
YES
Isolate the short pin.
NO
Failure has been excluded.
Is the CPU cooling fan is working properly? Has the power been connected correctly?
NO
Plug in the power of the cooling fan.
YES
Failure has been excluded.
Is the memory module correctly installed into the DIMM slot?
NO
Insert and push the memory module into the DIMM slot vertically.
YES
Failure has been excluded.
Plug in ATX power cable and turn on the POS PC.
Next Page


Is the LED on? Is the CPU fan running?
NO
The problem may be caused by power supply, CPU, memory, CPU, or memory socket.
YES
Failure has been excluded.
Is there any image on the display?
NO
The VGA card, VGA card slot, or the monitor may be defective.
YES
Failure has been excluded.
Turn off the system and reboot after the keyboard and the mouse are plugged in.
Is the keyboard working?
NO
The keyboard or the keyboard connector may be defective.
YES
Press <Del> to enter BIOS setup mode. Select "Load Optimized Defaults", save your selection, and exit setup.
Failure has been excluded.
Turn off the system and re-connect the IDE cable. Reboot the system and see if it works.
NO
The IDE device / connector / cable may be defective.
YES
Reinstall Windows OS, the add-on cards, and the cables. Try to reboot the system again.
Failure has been excluded.
Problem solved.

Note:

For questions about other error messages, please contact the technical support.